Data Sheet

We make sure

FUJITSU COMPUTERS SIEMENS

ESPRIMO™ P Series Economy in a microtower

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Pages 5

Economy

Sophisticated technologies for best in class economy.

Reduce cost of your professional PC by lowest energy consumption! The switched monitor outlet powers the display through the system. Switching off the systems means disconnecting the display, this saves up to ~ 20 % of the display power consumption annually. Additionally, software and BIOS power management solutions reduce the overall average power consumption.

Further Total Cost of Ownership reductions are achieved through a comprehensive set of manageability features, sophisticated security solutions and a service friendly cabinet design.

For highest economy, ESPRIMO professional PCs are designed to increase your productivity and to decrease your cost.

Reliability

- Complete system development and manufacturing by Fujitsu Siemens Computers guarantees highest quality
- Platform stability and product continuity with managed lifecycle up to 18 month and chipset diversity

Environment

- Build with specially selected materials, the ESPRIMO Green PC brings economy and ecology in harmony
- From development to production, from transport to recycling –minimize the impact on the environment and limit the use of unrecoverable resources.

Ergonomics

- Sophisticated hardware design with optimized fans and air flow provides most silent system for an efficient working environment
- Best usability and complete quality – service friendly cabinet and easy access to all components

Customizing

- Tailor-made products to meet customer individual requirements
- Freedom of choice with systems which perfectly fit to specific customer

Manageability

- Reduce Total Cost of Ownership with a comprehensive set of system management features
- Easy and remote administration with DeskView client management

Security

- Access and data protection with sophisticated hardware and software components for secure systems
- Protect property – secure hardware and data and limit access with SmartCard Reader

	P5915	P5916	P5615	P5616	P5710
Mainboard					
Chipset	iQ965	iQ965 iAMT	NVIDIA C51PV	NVIDIA C51PV	ATI Radeon® Xpress 1100
Mainboard Number	D2312	D2314	D2461-A	D2461-B TPM	D2451
Mainboard form factor	µBTX	µBTX	µBTX	µBTX	µBTX
Processor socket	LGA 775	LGA 775	Socket AM2	Socket AM2	LGA 775
Front side bus resp. system bus support	533/800/1066 MHz	533/800/1066 MHz	2000 MHz	2000 MHz	533/8001066 MHz
BIOS version	Phoenix Vers. 6.0	Phoenix Vers. 6.0	Phoenix Vers. 6.0	Phoenix Vers. 6.0	Phoenix Vers. 6.0
Flash EPROM BIOS update by software	x	x	x	x	x
Recovery BIOS	x	x	x	x	x
Processor					
Intel® Core™ 2 Duo	up to E6600	up to E6600	-	-	up to E6600
Second level cache	2MB/4MB	2MB/4MB	-	-	2MB/4MB
Front side bus (FSB)	1066MHz	1066MHz	-	-	1066MHz
Intel® Core™ 2 Duo	up to E4400	up to E4400	-	-	up to E4400
Second level cache	2MB	2MB	-	-	2MB
Front side bus (FSB)	800MHz	800MHz	-	-	800MHz
Intel® Pentium® D9xx	up to D945	up to D945	-	-	up to D945
Second level cache	2x2MB	2x2MB	-	-	2x2MB
Front side bus (FSB)	800MHz	800MHz	-	-	800MHz
Intel® Pentium® D8xx	up to D820	up to D820	-	-	up to D820
Second level cache	2x1MB	2x1MB	-	-	2x1MB
Front side bus (FSB)	800 MHz	800 MHz	-	-	800 MHz
Intel® P4 6xx	up to 641	up to 651	-	-	up to 651
Second level cache	2MB	2MB	-	-	2MB
Front side bus (FSB)	800 MHz	800 MHz	-	-	800 MHz
Intel® P4 5xx	541	541	-	-	541
Second level cache	1MB	1MB	-	-	1MB
Front side bus (FSB)	800 MHz	800 MHz	-	-	800MHz
Intel® Celeron D	up to D360	up to D360	-	-	up to D360
Second level cache	512 KB	512 KB	-	-	512 KB
Front side bus (FSB)	533 MHz	533 MHz	-	-	533 MHz
Athlon™ 64 X2 (socket)	-	-	up to 5000+ (AM2)	up to 5000+ (AM2)	-
Second level cache	-	-	2 x 512 KB	2 x 512 KB	-
System Bus support	-	-	2000 MHz	2000 MHz	-
Athlon™ 64 X2 Energy efficient (socket)	-	-	3800+ (AM2)	3800+ (AM2)	-
Second level cache	-	-	2 x 512 KB	2 x 512 KB	-
System Bus support	-	-	2000 MHz	2000 MHz	-
AMD Athlon™ 64 (socket)	-	-	3800+ (AM2)	3800+ (AM2)	-
Second level cache	-	-	512 KB	512 KB	-
System Bus support	-	-	2000 MHz	2000 MHz	-
AMD Sempron™ (socket)	-	-	3200+ (AM2)	3200+ (AM2)	-
Second level cache	-	-	128 KB	128 KB	-
System Bus support	-	-	1600MHz	1600MHz	-
AMD Sempron™ Energy efficient (socket)	-	-	3200+ (AM2)	3200+ (AM2)	-
Second level cache	-	-	128 KB	128 KB	-
System Bus support	-	-	1600 MHz	1600 MHz	-
Memory					
Memory support	533/667/800 MHz	533/667/800 MHz	533/667/800 MHz	533/667/800 MHz	533/667 MHz
DIMM slots	4	4	4	4	2
dual channel support	x	x	x	x	-
Max. capacity DDR2 SDRAM 667 MHz	4GB	4GB	4GB	4GB	2GB
for dual channel performance, a minimum of 2 memory modules have to be ordered. Capacity per channel has to be the same	8GB address space (with future memory modules). Fully useable.	8GB address space (with future memory modules). Fully useable.	8GB address space (with future memory modules). Fully useable.	8GB address space (with future memory modules). Fully useable.	4GB address space (with future memory modules). Thereof, max. 3.0GB usable for physical main memory.
Interfaces					
Mouse/keyboard (PS2)	-/-	-/-	-/-	-/-	-/-
Serial (9pi, 16 byte FIFO, 16550 compatible)	x	x	x	x	x
Second serial port	-	-	-	-	-
Parallel (25pin with EPP and ECP)	-	-	-	-	-
Display (15 pin, VGA)	x	x	x	x	x
DVI	optional	optional	optional	optional	optional
Micro (mono) rear	x	x	x	x	x
Line in (stereo) rear	x	x	x	x	x
Line out (stereo) rear	x	x	x	x	x
Micro (mono) front	x	x	x	x	x
Headphone in front	x	x	x	x	x
LAN RJ45	x	x	x	x	x
Universal Serial Bus (USB 2.0) in total	10	10	8	8	10
therefore USB rear	6	6	4	4	6
USB front	2	2	2	2	2
USB internal	2, optional rear	2, optional rear	2, optional rear	2, optional rear	2, optional rear
Interfaces add on cards					
Dual port RS232 , serial	optional	optional	optional	optional	optional
LAN on board					
10/100/1000 MBit/s	Broadcom BCM5755	Intel® 82573E	NVIDIA C51PV	NVIDIA C51PV	Realtek RTL8110
Wake up on LAN (WOL)	x	x	x	x	x
PXE	x	x	x	x	x
BootP	tested	tested	tested	tested	tested

	P5915	P5916	P5615	P5616	P5710
LAN add on cards					
Gigabit Ethernet, SysKonnect	optional	optional	optional	optional	optional
Audio on board					
Internal speaker supports audio playback	x	x	x	x	x
High definition audio	Realtek ALC 260	Realtek ALC 260	Realtek ALC 260	Realtek ALC 260	Realtek ALC 260
I/O controller onboard					
Fast IDE/Ultra DMA-100 bus master capability	-	-	-	-	-
Serial ATA / thereof eSATA	4 / 0	4 / 0	4 / 0	4 / 0	4 / 0
Serial ATA II / 3GBit	x/x	x/x	x/x	x/x	x/x
Raid 1/0	-	x	x	x	-
Drive bays	6	6	6	6	6
internal 3,5''	2	2	2	2	2
external 3,5''	2	2	2	2	2
external 5,25''	2	2	2	2	2
Floppy disk drive 1.44 MB standard	optional	optional	optional	optional	optional
Hard disk drives					
Serial ATA II 80 / 160 / 250 GB supporting NCQ and 3GBit (if chipset support is available)	x/x/x	x/x/x	x/x/x	x/x/x	x/x/x
Optical drives (IDE)					
24/10/24/8-speed ATAPI CD RW / DVD ROM slim	-	-	-	-	-
DVD+/-RW writer slim	-	-	-	-	-
Optical drives (SATA)					
16/48-speed DVD ROM	optional	optional	optional	optional	optional
48/24/48/16-speed CD-RW / DVD ROM	optional	optional	optional	optional	optional
DVD SuperMulti writer double layer support	optional	optional	optional	optional	optional
Slots					
PCI	2 (170 / 315 mm)	2 (170 / 315 mm)	2 (170 / 315 mm)	2 (170 / 315 mm)	2 (170 / 315 mm)
PCI Express x16	1 (250 mm)	1 (250 mm)	1 (250 mm)	1 (250 mm)	1 (250 mm)
PCI Express x1	1 (230 mm)	1 (230 mm)	1 (230 mm)	1 (230 mm)	1 (230 mm)
Graphic on board	Intel® GMA 3000	Intel® GMA 3000	NVIDIA C51PV	NVIDIA C51PV	ATI RC415
Shared memory depending on driver	up to 256MB	up to 256MB	up to 256MB	up to 256MB	up to 256MB
Resolution (color depth up to 32 Bit/pixel)					
1024 x 768 (recommended / max*)	85 / 120 Hz	85 / 120 Hz	120 / 200 Hz	120 / 200 Hz	85 / 120 Hz
1280 x 1024 (recommended / max*)	85 / 120 Hz	85 / 120 Hz	100 / 150 Hz	100 / 150 Hz	85 / 120 Hz
1600 x 1200 (recommended / max*)	85 / 100 Hz	85 / 100 Hz	85 / 100 Hz	85 / 100 Hz	85 / 100 Hz
1440 x 900 widescreen TFT (VGA / DVI)	x / x	x / x	x / x	x / x	x / x
1680 x 1050 widescreen TFT (VGA / DVI)	x / x	x / x	x / x	x / x	x / x
1920 x 1200 widescreen TFT (VGA / DVI)	x / x	x / x	x / x	x / x	x / x
* refresh rates reflect the max. graphics capabilities. Video quality can be deteriorated when using maximum settings. For TFT we recommend to use 60Hz.					
Graphic add on cards					
NVIDIAGeForce FX 7300LE 128MB, LP	-	-	-	-	-
NVIDIAGeForce FX 7300LE 256MB, LP	-	-	-	-	-
NVIDIAGeForce FX 7300LE 128MB	optional	optional	optional	optional	optional
NVIDIAGeForce FX 7300LE 256MB	optional	optional	optional	optional	optional
DVI adapter incl. Dual Monitoring (DVI/VGA)	optional	optional	optional	optional	optional
Dual-DVI adapter incl. Dual Monitoring (DVI/DVI)	optional	optional	-	-	-
Electrical values					
Rated voltage range, AC	100 - 127 / 200 - 240 V	100 - 127 / 200 - 240 V	100 - 127 / 200 - 240 V	100 - 127 / 200 - 240 V	100 - 127 / 200 - 240 V
Rated frequency range	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Operating voltage range, AC	90 - 137 / 180 - 264 V	90 - 137 / 180 - 264 V	90 - 137 / 180 - 264 V	90 - 137 / 180 - 264 V	90 - 137 / 180 - 264 V
Operating line frequency range	47-63 Hz	47-63 Hz	47-63 Hz	47-63 Hz	47-63 Hz
Max. output of power supply	260 W	260 W	260 W	260 W	260 W
PFC (power factor correction)	passive	passive	passive	passive	passive
Monitor outlet	yes, switched	yes, switched	yes, switched	yes, switched	yes, switched
Power consumption for standard configuration (W) / CPU	P4 541 / E6400	P4 541 / E6400	Athlon 64 X2 4200+	Athlon 64 X2 4200+	P4 541 / E6400
Peak (S0, running app. CD in use)	160W / 101W	160W / 101W	107W	107W	156 / 83 W
Average (S0, running OS, Idle mode)	69W / 66W	74W / 66W	50W	50W	64 / 55 W
Stand by (S3, energy saving modus, WOL enabaled)	2,9W / 3,0W	2,3W	2,9W	2,9W	2,3W
Minimum (ACPI status S5, soft off, **WOL enabled**)	1,6W	1,6W (7,7W iAMT enabled)	1,9W	1,9W	1,7 W
Minimum (ACPI status S5, soft off, **wake up power button only)**	-	0,9W	1,6W	1,6W	1,1 W
Minimum **"low power soft off"** (FSC patent pending) (ACPI S5, soft off, wake up power button only)	0,5W	-	-	-	-

	P5915	P5916	P5615	P5616	P5710
Heat dissipation (kJ/h / BTU/h) / CPU	E6400	E6400	Athlon 64 X2 4200+	Athlon 64 X2 4200+	E6400
Peak (S0, running app. CD in use)	364 kJ/h / 345 BTU/h	364 kJ/h / 345 BTU/h	385 kJ/h / 365 BTU/h	385 kJ/h / 365 BTU/h	299 kJ/h / 283 BTU/h
Average (S0, running OS, Idle mode)	238 kJ/h / 225 BTU/h	238 kJ/h / 225 BTU/h	180 kJ/h / 171 BTU/h	180 kJ/h / 171 BTU/h	198 kJ/h / 188 BTU/h
Stand by (S3, energy saving modus, WOL enabled)	10,8 kJ/h / 10,2 BTU/h	8,3 kJ/h / 7,8 BTU/h	10,5 kJ/h / 9,9 BTU/h	10,5 kJ/h / 9,9 BTU/h	8,3 kJ/h / 7,8 BTU/h
Minimum (ACPI status S5, soft off, **WOL enabled**)	6,2 kJ/h / 5,8 BTU/h	6,2 kJ/h / 5,8 BTU/h	6,9 kJ/h / 6,5 BTU/h	6,9 kJ/h / 6,5 BTU/h	6,2 kJ/h / 5,8 BTU/h
1W = 3,6kJ/h, 1W = 3,4121BTU/h					
Noise for standard configuration (HDD, ODD, FDD)	E6400	E6400	Athlon 64 X2 4200+	Athlon 64 X2 4200+	E6400
A weighted sound **power level Lwad** (in B) / Workplace related A-weighted sound **pressure level LpAm** (in dB(A)), (bystander position) (ISO9296)					
Operation mode 1: ODD load (Blue angel requirement)	4,4B / 29dB(A)	4,4B / 29dB(A)	4,4B / 29dB(A)	4,4B / 29dB(A)	5,1B / 36dB(A)
Operation mode 2: HDD load (Blue angel requirement)	3,8B / 23 dB(A)	3,8B / 23 dB(A)	3,7B / 22dB(A)	3,7B / 22dB(A)	3,5B / 20dB(A)
Operation mode 3: CPU 90% load (Blue angel requirement)	3,9B / 24dB(A)	3,9B / 24dB(A)	3,6B / 21dB(A)	3,6B / 21dB(A)	3,7B / 23dB(A)
Operation mode 4: High load	3,9B / 24dB(A)	3,9B / 24dB(A)	3,7B / 22dB(A)	3,7B / 22dB(A)	3,7B / 23dB(A)
Operation mode 5: Office applications	3,7B / 22dB(A)	3,7B / 22dB(A)	3,7B / 22dB(A)	3,7B / 22dB(A)	3,5B / 21dB(A)
Idle mode (Blue angel requirement)	3,7B / 22dB(A)	3,7B / 22dB(A)	3,6B / 21dB(A)	3,6B / 21dB(A)	3,5B / 20dB(A)
Ambient temperature (IEC 721)	15°C'- 35°C	15°C'- 35°C	15°C'- 35°C	15°C'- 35°C	15°C'- 35°C
Dimensions (H x W x D)	390 x 203 x 392 mm	390 x 203 x 392 mm	390 x 203 x 392 mm	390 x 203 x 392 mm	390 x 203 x 392 mm
Operating position (vertical/horizontal)	x /-	x /-	x /-	x /-	x /-
Weight (depending on config)	approx. 12 kg	approx. 12 kg	approx. 12 kg	approx. 12 kg	approx. 12 kg
Approvals and standards					
CE certification according to EU Directives 89/336/EEC (EMC) and 06/95/EC (Product safety)	x	x	x	x	x
Ergonomics ISO9241 (GS mark)	x	x	x	x	x
Product safety IEC60950, EN60950, UL 60950, CSA22.2, UL 60950, CSA22.2, No.60950	x	x	x	x	x
Electromagn. compatibility EN55022/B, FCC class B, EN55024, EN61000-3-2/3	x	x	x	x	x
Environmental compatibility					
RoHS (Restriction of hazardous substances)	x	x	x	x	x
WEEE (Waste electrical and electronical equipment)	x	x	x	x	x
Energy Star	x	x	x	x	x
Blue Angel 2007	compliant	compliant (iAMT disabled)	compliant	compliant	compliant
Nordic Swan	x	x	x	x	x
Med certification according to EN60950 and EN60601-1-	-	-	-	-	-
Software (compatibility / preinstalled)					
Microsoft Windows 2000	x / -	x / -	x / -	x / -	x / -
Microsoft Windows XP Home	x / optional	x / optional	x / optional	x / optional	x / optional
Microsoft Windows XP Professional	x / optional	x / optional	x / optional	x / optional	x / optional
Microsoft Windows XP Professional x64 Edition	x / optional	x / optional	x / optional	x / optional	x / optional
Microsoft Windows Vista	x / optional (Feb 2007)	x / optional (Mar 2007)	x / optional (Feb 2007)	x / optional (Mar 2007)	x / optional (Feb 2007)
Microsoft Windows Vista™ capable* (min. 512MB RAM necessary)	x	x	x	x	x
Microsoft Windows Vista™ Premium Ready (min. 1GB RAM / DVD reader necessary)	x	x	x	x	x
Linux certified	-	-	-	-	-
Additional Software					
Recovery DVD (Microsoft Windows XP / Vista)	x / optional	x / optional	x / optional	x / optional	x / optional
Drivers and Utility DVD (DUDVD) (Microsoft Windows XP / Vista)	x / optional	x / optional	x / optional	x / optional	x / optional
XONTROL (noise reduction for optical drives)	x	x	x	x	x
SafeStandby (only Windows XP)	x	x	-	x	x
Altiris Local Recovery Pro (only for Windows XP)	x	x	x	x	x
Others					
Thermal Management	x	x	x	x	x
Keyboard on (Fujitsu Siemens Computers keyboard required)	x	x	x	x	x
Spare part availability	5 years	5 years	5 years	5 years	5 years

	P5915	P5916	P5615	P5616	P5710
Compatibility (references)					
Microsoft Operating Systems (HCT / HCL entry)	x	x	x	x	x
PC 2001, DMI 2.0, WMI 1.5, USB 2.0	x	x	x	x	x
Manageability					
ASF 2.0 (Alert Standard Format)	x	x	-	-	-
iAMT (Intel Active Manageability Technology)	-	x (version 2.x)	-	-	-
DeskView 10.x client management including:					
On/Offline remote client management	x	x	x	x	x
Detailed system inventory management and reports	x	x	x	x	x
BIOS Management	x	x	x	x	x
Remote power management	x	x	x	x	x
System notifications	x	x	x	x	x
Advanced alerts (ASF implementation)	x	x	-	-	-
Security Remote Control	x	x	x	x	x
DeskView Helpdesk Integration	x	x	x	x	x
DeskUpdate Driver management	x	x	x	x	x
DeskView Migrate	optional	optional	optional	optional	optional
DeskView Control	optional	optional	optional	optional	optional
PXE 2.1 Boot code	x	x	x	x	x
BootP Boot Code including Bootmanage Administrator Software	tested	tested	tested	tested	tested
Wake up from S5 (off mode)	x	x	x	x	x
Intrusion switch	optional	optional	optional	optional	optional
Security					
Physical Security implemented in the cabinet					
Prepared for Kensington lock, eye for padlock	x	x	x	x	x
Integrated cabinet lock	optional	optional	optional	optional	optional
System Security					
Boot sector virus protection	x	x	x	x	x
Write protect option for the Flash EPROM	x	x	x	x	x
Embedded security (TPM1.2)	x	x	-	x	-
Norton Internet Security (NIC)	x	x	x	x	x
Control of all USB interfaces / external USB interfaces detachable separately	- / -	- / -	- / -	- / -	- / -
Boot protection for floppy disk/CD drive and write protection for floppy disk drive	x	x	x	x	x
Control of external interfaces	x	x	x	x	x
User Security					
User and supervisor BIOS password	x	x	x	x	x
SystemLock 2 BIOS SmartCard Security	x	x	x	x	x
Hard disk password	x	x	x	x	x
Access protection via external SmartCard reader	optional	optional	optional	optional	optional
Access protection via internal SmartCard reader	optional	optional	optional	optional	optional
Fujitsu Siemens Computers MEMORYBIRD BIOS lock	x	x	x	x	x
Serviceability					
FlexySlot	x	x	x	x	x
EasyFix	x	x	x	x	x
EasyChange (for HDD / for optical drives)	x / x	x / x	x / x	x / x	x / x
EasyPull	x	x	x	x	x

**) Not all Windows Vista™ features are available for use on all Windows Vista Capable PCs. All Windows Vista Capable PCs will run the core experiences of Windows Vista, such as innovations in organizing and finding information, security, and reliability. Some features available in premium editions of Windows Vista -- like the new Windows® Aero™ user interface -- require advanced or additional hardware. Check www.windowsvista.com/getready for details.*

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